

## Nursing Students' Engagement in the Learning Environment

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**Abstract:** Student engagement is extremely important in order to achieve the learning outcomes and the supportive learning environment is vital to the success of the teaching learning process. **The aim of the work** is to explore the nursing students' engagement in learning environment of medical surgical curricula. **Materials and Method:** the study conducted at, Medical Surgical Nursing Department, the Faculty of Nursing Alexandria University in Egypt. One tool used for the data collection; students' engagement in learning environment questionnaire includes three domains and seventeen sub-domains with thirty five items. **Results:** half of subjects agreed that medical surgical courses enhance their critical thinking, problem solving and self managed learning 54.2%, 50%, 47.8% respectively the mean and standard deviation of participation domain is 51.8 (8.9) and higher than meaningful domain 45.7 (7.8), focused attention 28.1 (5.9) There was no statistical significant difference between the nursing students' gender, GPA, area of residence and their engagement but there was a statistical significant difference between the nursing students' qualifications, semester and their engagement. **Conclusion and Recommendations:** the subjects engaged positively in relation to critical thinking, self managed learning strategies and also socially engaged in relation communication, interpersonal skills and relation with teachers and others because the educational environment provide a variety of learning opportunities that enhance their engagement in the learning environment. A longitudinal study can be conducted to measure the academic engagement.

**Key words:** Student engagement, academic engagement, learning environment, nursing education, nursing students

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### I. Introduction

Nurse educators have strived to diver nursing knowledge and skills in a rich way that builds capabilities in students so that they can be better prepared for the ever changing health care environment. Greater emphasis on engaging students to learn has been an important implication in nursing education to improve educational outcome<sup>(1)</sup>.

Student engagement in the learning environment is a critical component in the curricula of pre-licensure nursing students which maximize the integration between cognitive, psychomotor and affective skills<sup>(2)</sup>. Nursing student engagement is defined as students' willingness to actively participate in the teaching-learning process, exhibiting tangible behaviors in the class or clinical environment or outside the class<sup>(3,4)</sup>.

Engagement is a meta-construct with three components, a) behavioral engagement includes academic and social participation b) emotional engagement is both positive and negative interaction with teachers, classmates, academics and c) cognitive engagement includes willingness to exert the effort necessary to understand complex ideas and master difficult tasks such as critical thinking, creative thinking, problem solving and adaptability<sup>(5,6)</sup>.

A supportive learning environment is vital element to the success of teaching learning process and one of the factors that achieve maximum student engagement. The learning environment refers to the social, psychological and pedagogical contexts in which learning occurs, which affects student achievement and attitudes and to the contextual factors which influence the way that learning is approached<sup>(7)</sup>.

In recent years, there has been a push for reform in nursing education towards more innovative teaching methods, other researches explain that in order for students to convert content into knowledge, they need to be actively involved in the learning process. It is the responsibility of the educator to create a learning environment that facilitates learning while meeting the needs of the adult learner and developing their capabilities in classrooms and clinical settings<sup>(8)</sup>.

Nursing students are perceiving the clinical learning environment as anxiety and stress provoking especially in medical surgical courses in the nursing curricula which described by the majority of nursing students as the most difficult and sophisticated courses within the nursing program

Consequently, Low engagement in learning process among nursing students leads to dissatisfaction, negative experience, and rise in drop outs<sup>(9)</sup>. Also, engagement has a major role to persist the students in their enrolled course and increasing students' belonging and engagement in their organization and learning environment<sup>(10)</sup>. So, studying academic engagement helps to understand student dropout and to address the strengths and areas which need improvement

## II. Background:

The baccalaureate nursing education program at the Faculty of Nursing, Alexandria University in Egypt is consisted of eight semesters, the BSN has 143 credits include nursing courses such as medical surgical (4 semesters), critical and emergency care, mental and psychiatric health, community, gynecological, administration, gerontological, pediatric, nursing education and non nursing courses (medical and behavioral courses) and quality assurance system was established in the institution until 2008. A variety of interactive teaching strategies used in all courses; medical surgical courses are applying pedagogical strategies such as clinical conferences, simulation, e-learning, case scenarios, e-portfolio.

## III. Theoretical framework:

The conceptual framework is based on Astin's theory of involvement describing student engagement as the quantity and quality of physical and psychological energy a student devotes to educational experiences see<sup>(7,11)</sup>

Figure 1

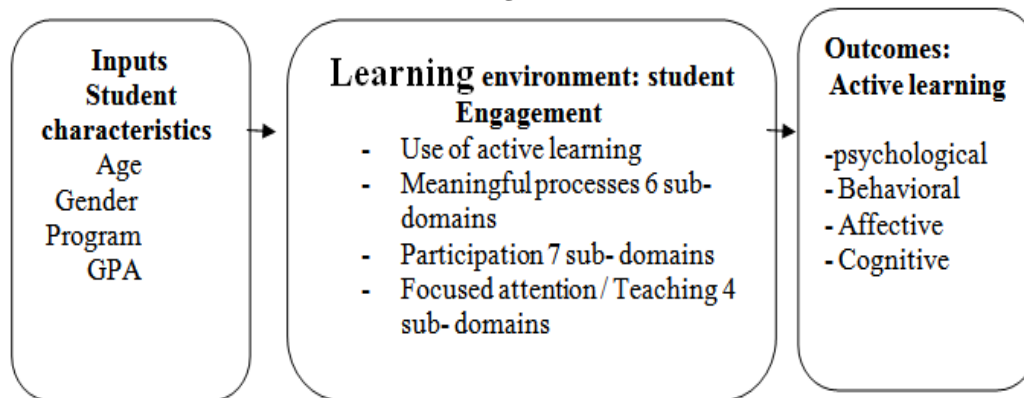


Figure 1: Student engagement and active learning in the learning environment Astin's theory of involvement<sup>(11)</sup>

### Aim Of The Work

The aim of the work is to explore the nursing students' engagement in learning environment of medical surgical curricula.

### Research Questions :

- 1- Are the nursing students engaged in the learning environment of medical surgical courses
- 2- Is there a relation between nursing students' engagement and their gender, area of residence, qualifications, GPA and semester.

## IV. Materials And Method

### Materials

#### Research design:

This research is exploratory cross sectional research design.

#### Setting :

The study conducted at, Medical surgical Nursing Department, the Faculty of Nursing Alexandria University.

### **Subjects:**

The subjects of this study included all undergraduate nursing students enrolled in medical surgical I,II, III nursing courses during the academic year 2013-2014 comprised 550 nursing students. The students who were willing to participate and were available at the time of the study were 534 nursing students.

### **Tool**

#### **One tool used for data collection**

#### **Students' Engagement in learning environment Questionnaire:**

The tool was developed by Kember & Leung (2005)<sup>(12)</sup>, and it adopted and translated into Arabic. This tool used to assess nursing students' academic engagement in learning environment. The tool consists of three domains; meaningful processes, participation, focused attention. And 17 sub-domains with 35 items. All items scored on a 5 Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree".

Meaningful processes or intellectual domain has 6 sub-domains (12 items) as follows: critical thinking (2 items), creative thinking (2 items), self managed learning (2 items), adaptability (2 items), problem solving (2 items), computer literacy (2 items).

Participation had 7 sub-domains (14 items) as follows: communication skills (2 items), interpersonal skills and group work (2 items), active learning (2 items), feedback to assist learning (2 items), relationship between teachers and students (2 items), relationship with other students (2 items), cooperative learning (2 items).

Focused attention has 4 sub-domains (9 items) as follows: assessment (3 items), workload (2 items), coherence of curriculum (2 items) and teaching for understanding (2 items).

In addition students' personal profile such as age, gender, qualifications, living away from family (residence on-campus or off campus), course, GPA was included.

### **Method**

Official permission to conduct the study was obtained from the ethics committee, dean Faculty of Nursing, University of Alexandria and from the head of Medical surgical nursing department. Study tool was translated into Arabic. A jury consisting of 5 experts in medical surgical nursing and nursing education reviewed study tool for testing content validity and ensuring the accuracy of translation. Modifications were done according to the results obtained. Reliability of the tool was established with coefficient of internal consistency computed by Cronbach was 0.82.

A pilot study was done on 30 nursing students to ensure clarity and applicability of tools and to estimate the time required for completion of the questionnaire.

Data collection was done by distributing the tool to every student on individual base either in their classrooms (lectures) and in the clinical labs (clinical groups).

The researchers were available with students to ensure the completeness and individuality in answering the tool.

### **Ethical considerations:**

The students' rights protected by explaining to the students the purpose and significance of the study. A written informed consent to participate in the study obtained from nursing students. Anonymity of the participants and confidentiality of the data was maintained.

### **Statistical analysis**

The response rate was 100%. After data were collected it was revised, coded and fed to statistical software SPSS version 17. The given graphs were constructed using Microsoft Excel software. All statistical analysis was done using two tailed tests and alpha error of 0.05. P value equals to or less than 0.05 was considered to be statistically significant. Score for each dimension was calculated by summing the scores of each item of the dimension. Descriptive statistics were done using numbers and percentage for categorical data while mean and standard deviation for scale data. Independent samples t-test and One Way ANOVA were used for comparing means among the study groups.

## **V. Results**

**Table (1)** shows the nursing students' personal data, it reveals that the majority of the subjects were females and had secondary schools and lived with their families and more than half of them enrolled in third semester and in medical surgical (2).

**Table (2)** shows that around half of subjects agreed that medical surgical courses enhance their critical thinking, problem solving and self managed learning 54.2%, 50%, 47.8% respectively and quarter of them had strongly agree in relation to critical thinking, adaptability

25.6%, 25.2%. Nearly half of students agreed that the courses increase their communication skills, interpersonal skills, relation with other students and teachers, cooperative learning.

Less than half of the subjects agreed that teaching activities, coherence of curriculum and ways of assessment and only 32% agreed that workload enhance their engagement.

**Table (3)** illustrates that the mean and standard deviation of participation domain is 51.8 (8.9) was the highest mean scores compared with meaningful domain 45.7 (7.8), focused attention domain 28.1 (5.9). Critical thinking (8.0) and self managed learning (7.8) sub-domains were the highest mean of meaningful process domain. Communication (7.8) and interpersonal skills & group work (7.5) sub-domains of Participation domain and Assessment (7.4) was the highest mean score but workload (6.2) was the lowest mean score of the focused attention domain.

**Table (4)** shows that The highest mean of in the three domains; meaningful processes, participation and focused attention among students had A grade and the lowest mean of meaningful processes, participation and focused attention among students had D grade.

There was no statistical significant difference between the nursing students' gender, GPA, area of residence and their engagement but there was a statistical significant difference between the nursing students' qualifications, semester and their engagement.

**Table (1) the distribution of nursing students' personal data n=534**

Personal data		No	%
Gender	Male	211	39.5
	Female	323	60.5
Qualification	Secondary school	347	65.0
	Technical institute of Nursing	173	32.4
	Others	14	2.6
Residence	University city	33	6.2
	With family	438	82.0
	Others	63	11.8
GPA	D	8	1.5
	C-	13	2.4
	C	95	17.8
	C+	209	39.1
	B-	19	3.6
	B	141	26.4
	B+	43	8.1
	A-	5	0.9
Semester	A	1	0.2
	2 <sup>nd</sup>	140	26.2
	3 <sup>rd</sup>	276	51.7
Course	4 <sup>th</sup>	118	22.1
	Medical surgical nursing (1)	139	26.0
	Medical surgical nursing (2)	277	51.9
	Medical surgical nursing (3)	118	22.1

**Table (2) Distribution of domains of academic engagement as perceived by nursing students n=534**

Domain	Sub- domains	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Meaningful process	Critical thinking	1.3	7.2	11.7	54.2	25.6
	Creative thinking	2.7	13.4	15.4	46.9	21.5
	Self managed learning	2.4	8.2	17.0	47.8	24.5
	Adaptability	3.0	10.3	14.7	46.8	25.2
	Problem solving	3.0	10.9	14.9	50.0	21.2
	Computer literacy	7.9	14.7	16.4	41.4	19.6
Participation	Communication skills	2.8	11.3	13.8	46.8	25.4
	Interpersonal skills & group work	4.6	12.2	13.3	47.1	22.9
	Active learning	5.4	15.0	13.9	45.6	20.1
	Feedback to assist learning	6.4	12.2	15.2	45.6	20.7
	Relation between teacher & student	7.9	16.4	17.9	42.0	15.9
	Relation with other students	4.9	15.0	14.7	46.3	19.1
Focused attention	Cooperative learning	4.0	13.3	15.1	45.5	22.1
	Teaching for understanding	9.1	11.2	16.7	43.9	19.1
	Assessment	5.1	14.0	17.0	43.7	20.1
	Workload	15.6	20.9	17.5	32.0	13.9
	Coherence of curriculum	5.5	14.7	15.8	43.5	20.6

**Table (3) Mean and standard deviation of the academic engagement's domains and sub-domains**

Domain	Sub domains	Mean	SD	Mean (SD)
Meaningful process	Critical thinking	8.0	1.4	45.7 (7.8)
	Creative thinking	7.5	1.9	
	Self managed learning	7.8	1.7	
	Adaptability	7.7	1.8	
	Problem solving	7.6	1.7	
	Computer literacy	7.2	2.0	
Participation	Communication skills	7.8	1.7	51.8 (8.9)
	Interpersonal skills & group work	7.5	1.9	
	Active learning	7.3	1.8	
	Feed back to assist learning	7.4	1.9	
	Relationship between teachers & students	7.0	1.9	
	Relationship with other students	7.3	1.9	
	Cooperative learning	7.4	1.9	
Focused attention	Teaching for understanding	7.2	1.9	28.1 (5.9)
	Assessment	7.4	1.8	
	Workload	6.2	2.2	
	Coherence of curriculum	7.2	2.1	

**Table (4) Relation between nursing students' personal data and their engagement**

Personal data	Meaningful processes		Participation		Focused attention			
	Mean	SD	Mean	SD	Mean	SD		
Gender	Male	45.5	8.3	51.4	9.2	27.8	5.8	
	Female	45.9	7.4	52.0	8.8	28.2	6.1	
	P+	0.502		0.463		0.498		
Qualification		45.0	8.0	50.9	9.5	27.3	6.1	
	secondary Schools							
	Technical institute of nursing	47.0	7.1	53.4	7.9	29.4	5.5	
	Others	47.6	7.3	52.5	5.6	28.3	5.2	
	P	0.013*		0.012*		0.001*		
Residence	University city	45.5	6.9	51.2	9.4	27.6	7.2	
	With their family	45.5	8.0	51.7	9.1	28.0	5.9	
	Others	47.2	6.5	52.8	7.4	28.3	5.9	
	P	0.294		0.616		0.863		
GPA	D	40.3	15.3	45.4	16.9	23.4	10.5	
	C-	42.8	7.1	48.1	7.0	25.2	4.9	
	C	46.0	7.7	52.0	8.4	27.9	5.4	
	C+	45.7	7.9	51.5	9.5	27.9	5.9	
	B-	44.6	7.3	49.5	10.5	26.1	7.1	
	B	46.0	7.0	53.0	7.8	28.9	5.8	
	B+	46.4	8.3	52.0	9.1	28.2	6.7	
	A-	47.6	1.8	51.8	4.3	29.8	3.2	
	A	56.0	0.0	56.0	0.0	31.0	0.0	
		P	0.356		0.237		0.092	
	Semester	2 <sup>nd</sup>	46.0	7.1	52.3	9.2	27.0	6.6
3 <sup>rd</sup>		46.4	7.7	52.5	8.3	28.8	5.3	
4 <sup>th</sup>		43.9	8.4	49.4	9.9	27.5	6.4	
	P	0.017*		0.005*		0.006*		
Course	Medical surgical 1	46.0	7.1	52.3	9.2	27.0	6.6	
	Medical surgical 2	46.4	7.7	52.5	8.2	28.8	5.3	
	Medical surgical 3	43.9	8.4	49.4	9.9	27.5	6.4	
	P	0.017*		0.005*		0.057		

## VI. Discussion

Student engagement (SE) is emphasized by pedagogical practices that encourage experiential learning , make an association and integration with the nursing curriculum and enhance students' inquiry in the learning environment <sup>(13)</sup>.

Regarding, the meaningful process domain of engagement ; the students reported that the medical surgical courses promote their critical thinking and problem solving which in line with a study proved that the faculty have incorporated simulated case scenarios, evidence –based practice , writing case study papers , e-learning (Moodle) and student portfolio because it give the students an opportunity to think and reflect on their earning experiences <sup>(14)</sup>.

Also, the active engagement with a diversity of clinical tasks lead to meaningful clinical learning as student self reflection applied in student portfolio as an active learning strategy which provide a chance to

students to revise their own work and consequently enhance self managed learning strategy , critical thinking and clinical reasoning <sup>(15)</sup>.

As regards, participation domain of engagement , the students reported that nursing courses helped them to acquire communication, interpersonal skills and group work , relation with teacher and other students and it maximize cooperative learning .This results may be referred to use of case based learning (CBL) and collaborative activities , group discussions and different forms of student interaction such as clinical conferences, presentations and clinical assignments which used regularly in medical surgical nursing courses that lead to building students' abilities to integrate data , analyze and apply the knowledge gained to future situations and also present ideas and be effective as member in a group and equipped with interpersonal skills.

This results supported by Levy (2008) who found that collaborative activities are preferred by students and valued to them to be actively engaged in learning <sup>(16)</sup>.

The previous results congruent with Gayton and McEwen (2007) who identified that interactive clinical environment which includes group work, provoking questions promote students' engagement <sup>(17)</sup>.

Finally , in relation to focused attention the third domain of engagement , the results revealed that less than half of the students agreed with teaching for understanding , assessment , coherence of curriculum, and this in line with Hickey et al. (2010) who emphasized a need to shift learning toward student centered “ thinking” instead of memorizing and this approach maximize students' ability to think and utilize high level of prioritizing. Also, the creativity within the educational environment facilitates the content delivery <sup>(18)</sup>.

Moreover, Evans'(2011) stated that using quiz questions increase the students' engagement but Pascarella and Terenzini (2005) who emphasized that the students disengaged when they failed in their learning experience <sup>(19,20)</sup>.

The results shows the lowest mean was workload this in line with a study emphasized that heavy workload affect students' engagement and learning <sup>(21)</sup>.

In conclusion, The results of this study revealed that participation domain was the highest mean compared with meaningful process and focused attention . On the other hand , other researchers found that meaningful process was the highest mean scores compared with participation and focused attention <sup>(7,9)</sup>.

Furthermore , the results of this study proved that there was no statistical difference between male and female in relation to their engagement and this is contracted with Pascarella and Terenzini (2005) who stated that male students had a greater adaptability in the clinical units than female students because they more independent but female students are more participated in challenging activities<sup>(22)</sup>. In addition , Bruce , omne-Ponten & Gustavsson (2010) mentioned that males overall active engagement but females more emotional engagement <sup>(22)</sup>

Also, there was no statistical difference between area of residence and students' engagement but Kuh et al.(2013) stated that students live away from family are more engaged with their classmates and learning activities <sup>(23)</sup>.

As regards students grades , the students with high grades reported the highest mean in engagement and this is congruent with a study reported that motivated and higher achievers increase their success and engagement and there was statistical significant relation between the academic achievement and student engagement <sup>(24)</sup>.

On other hand , another study reported that students with C grade is engaged because they try to improve their performance and there was no relation between self reported grade point average and student engagement<sup>(8,9)</sup>.

Finally, students' qualification had a significant relation with students' engagement , this is may be referred to the experience and background of students graduated from Technical Institute of Nursing .

## **VII. Conclusion and recommendations**

It can be concluded from the results of this study , although the nursing students always feel anxious and overloaded by the educational experiences in medical surgical courses; the results shows that they had positively engaged in relation to critical thinking , self managed learning strategies and also socially engaged in relation to communication , interpersonal skills and relation with teachers and others because the educational environment provide a variety of learning opportunities that enhance their engagement in the learning environment but the workload limit their engagement in both classroom and clinical experience.

Based on the results, it can be recommended that emphasis on using variety of assessment, teaching strategies and coherence of content within the curricula should be taken into consideration, conduction of workshops for novice nurse educators to raise the awareness about the concept student engagement and teaching strategies that enhance it . Schedule of assignment and quizzes at the beginning of the course enrollment should be implemented. A longitudinal study can be conducted to measure the academic engagement.

**Implication to nursing education:**

This study emphasizes the importance of using different learning activities and the nurse educators need to create learning environment which enhance nursing students' cognitive, emotional and social dimensions of learning. Also, assessing nursing student engagement and its relation with learning environment help the nurse educators to identify the strengths and weaknesses that enhance learning.

**References**

- [1] Chow P., Wong V., Chang M., Wong F., Wong J. Nursing students' engagement in collaborative learning. Australian Nursing Midwifery Conference ; NewCastle, City Hall , 2015
- [2] D'Souza M, , Venkatesaperumal R, Radhakrishnan J , Balachandranm S. Engagement in clinical learning environment among nursing students : role of nurse educators. Open Journal of Nursing 2013;3: 25-32
- [3] Greenwood CR, Horton BT, Utley CA. Academic engagement: Current perspectives on research and practice. School Psychology Review. 2002; 31(3): 328-349.
- [4] Yazzie-Mintz E. Voices of students on engagement: A report on the 2006 high school survey of student engagement. Bloomington, IN: Center for Evaluation and Education Policy. 2006.
- [5] Hudson K. Nursing student engagement : student, classroom and clinical engagement . International Journal of Nursing 2015;4(1):44-52
- [6] Hudson K., Carrasco R. Researching nursing students' engagement : successful findings for nursing . International Journal of Nursing & Clinical practice 2015;2:1-5
- [7] D'Souza M., Isac C. , Venkatesaperumal R , Subrahmanya K , Amirtharaj A. Exploring nursing student engagement in the learning environment for improved learning outcomes. Clinical Nursing Studies 2014,2 (1):1-16
- [8] Popkess A, McDaniel A. Baccalaureate nursing student's responses to the national survey of student engagement. Unpublished Manuscript. 2007.
- [9] Sattar A., Kouar R., Gillani S. Exploring nursing students engagement in their learning environment . American Journal of Nursing Research 2018; 6(1):18-23
- [10] Thomas L. Building student engagement and belonging in Higher Education at a time of change. Paul Hamlyn Foundations , 2012
- [11] Astin A. Student involvement : a development theory for higher education . Journal of College Student Development 1999; 40(5):518-529
- [12] Kember D, Leung D. The impact of the teaching and learning environment on the development of generic capabilities needed for a knowledge-based society. Learning Environments Research. 2005b; 8(3): 245-266.
- [13] Cole P., Chan L. Teaching principles and practice . Prentice Hall , New York , 1994.
- [14] Suckie L. Assessing student learning : a common sense guide , Boston MA: Anker Publishing Group , 2004
- [15] Koh L. The perception of nursing students of practice based teaching . Nurse Education in Practice 2002; 2,35-43
- [16] Levy Y. An empirical development of critical value factors (CVF) of online learning activities : an application of activity theory and cognitive value theory . Computer and Education 2008; 51:1664-1675
- [17] Gayton J., McEwen B. Effective online instructional and assessment strategies . The American Journal of Distance Education 2007; 21(3): 117-132
- [18] Hickey M., Forbes M., Greenfield S. Integrating the Institute of Medicine competencies in Baccalaureate curricular revision process and strategies . Journal of Professional Nursing 2010; 26(4):214-222
- [19] Evans M . Student written quiz questions : an active teaching learning strategy to enhance engagement . Med-Surg Matters 2011;Nov-Dec 20(6): 10-11
- [20] Pascarella E., Terenzini P. How College affects : a third decade of research . SnFrancisco: Jossey-Bass; 2005
- [21] Hudson K., Carrasco R. Nursing student engagement : Taking a closer look . Open Journal of Nursing 2017;7:193- 201
- [22] Bruce C., Omne Ponten M., Gustvsson P. Active and emotional engagement : a nation wide prospective, longitudinal study of Swedish nursing students. International Journal of Nursing Education Scholarship 2010;7(1) : 1-18
- [23] Kuh G., Kinzie J., Cruce T., Shoup R., Gonyea R. Unmasking the effects of student engagement in first year college grades and persistence . The Journal of Higher Education 2008 ; 79(5): 540-563
- [24] Gunuc S., Kusu A. The relationship between student engagement and their academic achievement . International Journal on New Trends in Education and Their Implications 2014;5(4):2016-231

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